

REMARKS

By this Amendment a number of claims have been canceled. Others have been amended to more clearly set forth the invention. Several new claims have been added, all of which are allowable as explained below.

Numerous claims have been rejected as anticipated in view of Finn et al. As explained below, Finn et al. is unlike the claimed invention and does not anticipate same.

The standard for anticipation is quite specific and set out in the MPEP page 2100-67 rev. 5, Aug. 2006 as follows:

"The identical invention must be shown in as complete detail as is contained in the ... claim ... the elements must be arranged as required by the claim"

The disclosure of Finn et al., when the above standard is considered, does not anticipate the various pending claims.

Independent claim 2, rejected as anticipated by Finn et al. includes the following unmet limitation:

"a plurality of ambient condition detectors with at least some of the microphones carried by a plurality of ambient condition detectors."

In this regard the Examiner's attention is directed to Fig. 3 of Finn et al. which clearly shows microphone 38 displaced from the occupant sensing element 156. A person of ordinary skill in the art would definitely not attach a microphone 38 to the sensor switch 156 in Finn et al. In fact, the paragraphs 45, 46 referred to on page 3 of the Office Action do not address the above-noted limitation from claim 2. For at least the above reasons pending claim 2 and associated dependent claims are not anticipated and are allowable.

For at least the above reasons none of claims 37-39 are anticipated by Finn et al.

None of pending claims 4-6 are anticipated by Finn et al. In Finn et al., all speech is generated by individuals in the vicinity of respective microphones 508,

552, 554, 556 in Fig. 10. Similar comments apply to the disclosures in Finn et al. in Fig. 1-9 thereof. Indeed, as Finn et al. state in the Abstract:

"In a DVE, digital voice enhancement, communications system, the selection decision for choosing which microphone to be active is based on a given function of the speech of a respective talker relative to his/her acoustic environment at the respective microphone."

Finn et al. is thus unlike the structure of pending claims 4-6 and does not anticipate them. Similar comments apply structures of the claims 32, 35, and 36.

Claims 7 and 8, as amended, are allowable for at least the same reasons as claims 2 and 3 discussed above.

The rejection of claims 9-17 is also a defective as explained below. Each of those claims includes the following unmet limitation:

"control circuits which include at least one of logic or executable instructions for producing speech intelligibility test signals to be audibly output by the at least one audio output device." (Claims 9-17)

At least the above quoted limitation is unmet by Finn et al. The Office Action admits that Finn et al. does not disclose the above noted limitation. On page 5 of the Office Action states:

"the control circuits including the inherent [sic] of executable instructions for producing speech intelligibility test signals to be audibly output by the at least one audio output device" (Page 5, Office Action)

None of the cited figures of Finn et al. 1, 7, 9 or 10 address the above-noted limitation. Each of those figures address a system for digital voice enhancement based on inputs of verbal speech which are detected by respective microphones. For example, the microphones 508, 552, 554, or 556 of Fig. 10. What is referred to on paragraph 25 of page 2 of Finn et al. has to do with microphone placement and function in a particular environment. None of paragraph 25 of Finn et al. address the above-noted limitation from claims 9-17. Similarly, paragraphs 32 and 36 of Finn et

al. which discuss characteristics of Fig. 1, also discuss in paragraph 25, of Finn et al. deal with electrical cancellation of noise or speech from other individuals in the region. In this regard, paragraph 32 of Finn et al. states as follows:

"Sum 98 supplied to loudspeaker 34 is substantially free of noise from noise source 14 as acoustically and electrically cancelled by adaptive filter models 40 and 56, respectively. Sum 98 is substantially free of speech from person 30 as electrically cancelled by adaptive filter model 84. Hence, sum 98 to loudspeaker 34 is substantially free of noise from noise source 14 and speech from person 30 but does contain speech from person 26, such that loudspeaker 34 cancels noise from noise source 18 at location 28 and introduces substantially no noise from noise source 14 and introduces substantially no speech from person 30 and does introduce speech from person 26, such that person 30 can hear person 26 substantially free of noise from noise sources 14 and 18 and substantially free of his own speech."

Paragraph 36 also cited on Page 5 of the Office Action in support of a rejection of claim 9 as anticipated by Finn et al. merely refer to the structure of Fig. 1 and the cancellation process referred to in Paragraph 32. Further, the structure of Fig. 8 also noted in support of the anticipatory rejection of claim 9 does not support this rejection. In Fig. 8 of Finn et al., as described in Paragraph 66 of Finn et al. two different tonal canceler circuits 390 and 420 are disclosed. As stated in Paragraph 66:

"In FIG. 8, an acoustic feedback tonal canceler 390 removes tonal feedback noise from the output of microphone 36 to prevent broadcast thereof by loudspeaker 34. Feedback tonal canceler 390 includes a summer 392 having an input 394 from microphone 36, an input 396 from feedback detector 398 and tone generator 400 supplied through adaptive filter model 402, and an output 404 to loudspeaker 34 through summer 90. Model 402 has a model input 406 from tone

generator 400, a model output 408 supplying a correction signal to summer input 396, and an error input 410 from summer output 404. A second feedback tonal canceler 420 is comparable to feedback tonal canceler 390. Feedback tonal canceler 420 includes a summer 422 having an input 424 from microphone 38, an input 426 from feedback detector 428 and tone generator 430 supplied through adaptive filter model 432, and an output 434 supplied to loudspeaker 32 through summer 106. Model 432 has a model input 436 from tone generator 430, a model output 438 supplying a correction signal to summer input 426, and an error input 440 from summer output 434."

As the above Paragraph 66 from Finn et al. makes clear the system of Fig 8 is directed to implementation of various cancellation methodologies which are quite unlike the structure of pending claims 9-17.

Additionally, the rejection of claim 9 on page 5 of the Office Action is defective in view of the fact that it refers to and relies on inherency as noted above. Inherency in patent law has a very specific requirement that there be absolute certainty of result. Where various results can flow from a structure there is no inherency. In the present instance, it is not inherent in Finn et al. as argued in the Office Action for there to be "executable instructions for producing speech intelligibility test signals to be audibly output by the at least one output device" as asserted in the rejection on page 5. As explained above, the circuits of Finn et al. address cancellation of noise signals and/or voice signals emitted by other individuals in the area which is quite different from the claim structures. For at least the above reasons, none pending claims 9-17 are anticipated by Finn et al.

For at least the following reasons, none of claims 18-26 are anticipated by Finn et al. The sensors of Finn et al., referred to in paragraphs 45, 46 thereof, are seat sensors, see Fig. 3 thereof sensor 156, to establish that an individual is present in his seat, as well as the location of a seat. Seat related information is used in Finn et al. for microphone selection. In this regard Finn et al. state:

"from this information [seat occupancy and location information] the general seat track position may be presumed or obtained from a seat track location sensor, and a best suited microphone selected."
(Paragraph 45, Finn et al.)

Further, as noted in numbered paragraph 46 of Finn et al.:

"In a desirable aspect, the system enables utilization of the vehicle occupant sensor or seat belt use detector information to determine if an occupant is present in a particular digital voice enhancement zone."

Thus, the sensors of Finn et al. are unlike the sensors of claims 18-26. Further, the rejection of claim 18 as anticipated by Finn et al. also relies on inherency wherein it is stated:

"it is inherent [sic] of the existence of such control circuits coupled to the sensor, the control circuits establishing an intelligibility index in response to signals from the microphone" (Page 7, Office Action)

In support of the above statement the Office Action refers to Fig. 10 and elements 570-576 as well as paragraph 75 of Finn et al. which states:

"Switch 578 selects which microphone to electrically couple to loudspeaker 514, and to any other loudspeaker if desired, so that a listener at loudspeaker 514 can hear the speech of a talker at the selected microphone. The selection decision is based on a given function of the speech of a respective talker relative to his/her acoustic environment at the respective microphone. The selection decision is based on a selection technique normalizing at least one and preferably both of a) different microphone sensitivities and b) different background noise levels at the respective microphones. This is

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accomplished by calculators 570, 572, 574, 576, etc. Calculator 570 determines the ratio $SNNR = f(\text{voice} + \text{noise}) / f(\text{noise})$ [Eq. 1]"

The elements 570-576 of Finn et al. considered in context of numbered paragraph 75, quoted above, Finn et al. make it clear that there are alternates to the claimed structure in Finn et al. which makes the use of inherency inappropriate and improper in rejecting claims 18-26 as anticipated.

The supplemental prior art documents relied on by the Office Action in rejecting various remaining claims is obvious do not address the above noted deficiencies of Finn et al. Hence, for at least the above reasons, all of the pending claims are allowable and the allowance of this application is respectfully requested.

Respectfully submitted,

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